Land Use Change in Canada

Parks and Conservation Areas on Prime Forest Land in B.C., 1965-1985

Lands Branch | Fact Sheet 87-2

Prime Forest Land

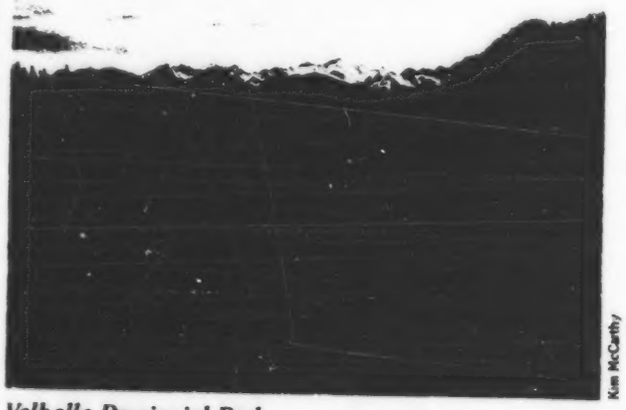
An estimated 44% of Canada is covered by forests. Approximately one-half (2 600 000 km²) is productive forest land, i.e., forest land that is capable of producing a merchantable stand within a reasonable length of time. The most productive forests in Canada are located in British Columbia and cover an area of approximately 440 000 km². Only about one-half of this is considered presently productive, available, and suitable for timber production.

In 1983, Canadian forests provided $29 billion worth of wood products, $13 billion in exports and 265 000 directly-related jobs. In British Columbia, the total value of forest products exports in 1983 was $5.5 billion, more than 50% of the province's total export revenues. Over 20% of British Columbians depend, either directly or indirectly, on the forest industry for employment. Despite these significant contributions, the amount of land allocated for forestry continues to decline due to factors such as: over-cutting, delays in reforestation, disease, pests, fires, forest land degradation and the withdrawal of land for non-forestry land uses.

This fact sheet focuses on the allocation of B.C.'s prime forest land for parks and conservation purposes. The period covered by the study is 1965 - 1985. Prime forest land is defined as Classes 1-4 of the Canada Land Inventory (CLI) Land Capability Classification for Forestry. This and complementary studies in other regions of Canada relating land-use change to forest land capability are produced under the Canada Land Use Monitoring Program.

Highlights

- Prime forest land (CLI Land Capability for Forestry Classes 1-4) occupies about 43% or 400 642 km² of British Columbia's total land area.
- By November 1985, 623 parks and conservation areas covering an area of 50 510 km² had been established; this represents 5.4% of B.C.'s total land area (929 730 km²).
- Between 1965 and 1985, 437 parks and conservation areas were established on an area of 21 866 km²; 264 of these areas contained 3 999 km² of prime forest land.
- The amount of prime forest land in B.C. set aside for parks and conservation purposes between 1965 and 1985 represents only 0.4% of the total land area, or 1.0% of the total prime forest land in the province.
- About four times as much of the area set aside for parks and conservation areas 1965-1985 was on non-prime forest land as opposed to prime forest land.
- The majority (84%) of change, by area, on prime forest land, 1965-1985, was accounted for by the Provincial Parks, Nature Conservancies and Recreation Areas category.



Kim McCarthy

Valhalla Provincial Park

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ERRATA SHEET

Parks and Conservation Areas on Prime Forest Land in B.C., 1965-1985

Highlights, second highlight,	- total area should read 52 164 km^2 not 50 510 km^2; this represents 5.6% not 5.4% of B.C.'s total land area.
Page 2, right hand column, line 18	- should read 389 km^2 not 510 km^2
Page 3, Summary, line 10	- should read 42% not 43%
Page 4, Table, National Parks	- second column should read 4 327 km^2 not 2 673 km^2; right hand column should read 4 412 km^2 not 2 758 km^2
Totals	- second column should read 30 298 km^2 not 28 644 km^2; right hand column should read 52 164 km^2 not 50 510 km^2.

Methodology

The land-use change statistics for this fact sheet were derived from a variety of sources, both published and unpublished. Data sources include: B.C. Provincial Parks list, Provincial Parks index, Nature Trust of British Columbia project list, information on Ecological Reserves, and CLI Land Capability for Forestry maps (published at 1:1 million and 1:125 000 scales and manuscript maps at 1:50 000 scale).

The CLI uses a seven class rating system. The best lands for tree growth are rated Class 1, whereas land rated Class 7 will not yield timber in commercial quantities. These ratings are independent of actual land cover or land use. In this study, prime forest land was defined as having a CLI forest capability rating of Class 1, 2, 3 or 4 which corresponds to a productivity rating of at least 3.6 cubic metres per hectare per year. The CLI Land Capability for Forestry program was undertaken at a scale of 1:50 000 or smaller and most of the mapped polygons contain two or more capability classes in a single complexed rating. Only the primary or first class listed in the capability rating was used in determining whether or not an area was prime forest land.[1]

Parks and conservation areas larger than 10 ha, which contained prime forest land and which were established between 1965 and 1985 in B.C. were mapped and analyzed. The minimum size of ten hectares was chosen because of the scale of the CLI forest capability maps; areas smaller than 10 ha were a small percentage of the total.[2]

Because the maps used as source documents were at a small scale, the area measurements should not be considered as absolute, particularly for individual sites.

Results

Prime forest land, as defined in this study, occupies 400 642 km² or about 43% of B.C.'s total land area. Not all of this land is available for timber production, however, because prime forest land, as defined in this study, is land classified in its natural state without consideration of location, access, distance to markets, size of units, ownership, or present state.

Parks and conservation areas larger than 10 ha that were established between 1965 and 1985 contained a total of 3 999 km² of prime forest land. This is 1% of the total prime forest land in the province. Approximately 84% (3 351 km²) were Provincial Parks and Recreation Areas. The accompanying table details these land-use changes.

Resource extraction is prohibited in most parks and conservation areas. Exceptions are possible in certain classes of Provincial Parks and Recreation Areas as noted later.

Of the five National Parks in B.C., as of November 1985, one, Pacific Rim, was created between 1965 and 1985. This park is made up of three distinct areas totalling about 510 km². Only the Long Beach Unit and the Broken Group Islands have been established and therefore analyzed in this study. These two units are located entirely on prime forest land. National Historic Parks were not considered because they tend to be small and often located in urban areas where forest capability has not been classified.

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Pacific Rim National Park

[1] The CLI Land Capability for Forestry ratings are based on the land's potential to grow commercial timber at optimum stocking levels, and consideration of the species best adapted to the site. All land is classified in its natural state, without management improvements such as fertilization and drainage and regardless of ownership, access, or present cover.

[2] 85 parks and conservation areas smaller than 10 ha were established between 1965 and 1985, occupying 370 ha.

There were 355 Provincial Parks, Nature Conservancies and Recreation Areas in B.C. as of November, 1985, covering an area of 45 132 km²; 173 were established between 1965 and 1985. One hundred and twenty-two of these were larger than 10 ha and partially or totally situated on prime forest land. These 122 areas contain 3 351 km² of prime forest land or 0.8% of the prime forest land in the province.

Provincial Parks are designated Class A, B or C. The Provincial Parks with the highest degree of protection from resource exploitation and alienation are the Class A parks. Certain resource developments may be allowed in Class B parks. Class C parks are community-type parks in unorganized areas and resource developments such as timber harvesting would normally not be allowed. Nature Conservancies are wilderness areas retained in a natural state within Provincial Parks. Recreation Areas allow multiple land uses when compatible with primary recreational use.

Eighty Regional Parks, occupying 123 km², were established between 1965 and 1985. Forty-six of these parks are larger than 10 ha and are either wholly or partly located on prime forest land. These 46 parks occupy 102 km² of prime forest land, which is less than one-tenth of one percent of the total prime forest land in B.C.

The Nature Trust, a charitable, non-profit corporation dedicated to the conservation of areas of ecological significance in B.C., had acquired 61 areas, covering 45 km², by 1985. All, or portions of 29 of these areas occupy 15 km² of prime forest land.

The Purcell Wilderness Conservancy, located in the Kootenays, was established in 1974 under special provincial legislation and occupies 1 315 km²; 120 km² of this area is prime forest land.

The Creston Valley Wildlife Management Area, created in 1968, occupies 70 km² of which 5 km² are prime forest land.

Five National Wildlife Areas, all greater than 10 ha in area, were established in B.C. between 1965 and 1985. Three of these areas are located either totally or partly on 3 km² of prime forest land.

All of the ecological reserves in B.C. have been established since 1971. As of November 1985, there were 115 ecological reserves in the province occupying 1 545 km²; 500 km² (32%) are water and 1 045 km² (68%) are land. Sixty-one ecological reserves are either wholly or partly located on prime forest land occupying an estimated 318 km². This is less than one-tenth of one percent of the total prime forest land in the province.

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Witty's Lagoon Regional Park

Summary

Parks and conservation areas established on prime forest land during this 20 year period amounted to 0.4% of the province's total land area; the total increase of land used for this purpose was 2.4%. Approximately four times as much of the area set aside for parks and conservation areas 1965-1985 was on non-prime forest land as opposed to prime forest land. About 70% of the total number of parks and conservation areas in B.C. were established between 1965 and 1985; however, the area they occupied was only about 43% of the total area used for parks and conservation, as of November 1985.

Other land uses such as urban development, hydroelectric impoundments, transportation and energy corridors also have an impact on the forest land base. On an individual basis, all of these land uses may have a small impact, but the cumulative impact may be significant. In addition to these various land uses, other considerations such as location, size of units, ownership and environmentally sensitive areas may affect the availability of prime forest land for timber production.

Further monitoring of land-use changes will be required to provide information essential for making sound decisions related to sustainability of renewable resource lands.

PARKS AND CONSERVATION AREAS ON PRIME FOREST LAND IN B.C.[1]

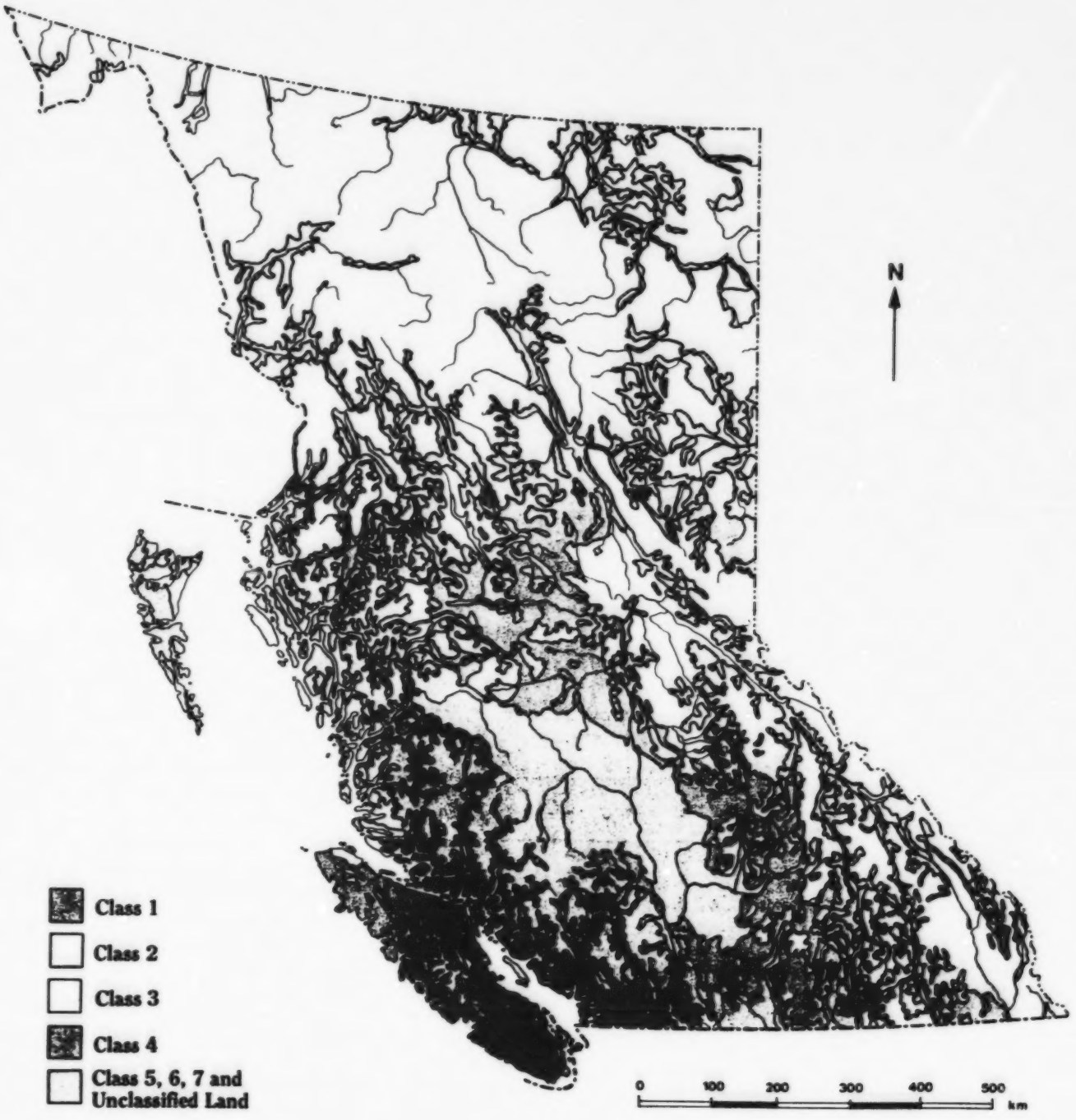
Parks and Conservation Areas	Before 1965		Established between 1965 and 1985[2] Prime		Non-prime		Total as of November 1985	
	No.	Area (km²)	No.	Area (km²)	No.	Area (km²)	No.	Area (km²)
National Parks	4	2 673	1	85	0	0	5	2 758
Provincial Parks, Nature Conservancies & Recreation Areas	182	25 971	122	3 351	51	15 810	355	45 132
Regional Parks	0	0	46	102	34	21	80	123
Nature Trust	0	0	29	15	32	30	61	45
Purcell Wilderness Conservancy	0	0	1	120	0	1 195	1	1 315
Creston Valley Wildlife Management Area	0	0	1	5	0	65	1	70
National Wildlife Areas	0	0	3	3	2	19	5	22
Ecological Reserves	0	0	61	318[3]	54	727[3]	115	1 045[3]
	186	**28 644**	**264**	**3 999**	**173**	**17 867**	**623**	**50 510**

[1] The area figures exclude any areas cancelled between 1965 and 1985; expansions and reductions in the size of individual parks between 1965 and 1985 are included in the statistics.

[2] Includes all parks and conservation areas regardless of size. Only those areas larger than 10 ha were analyzed for prime forest land. Those areas smaller than 10 ha (85 areas occupying 370 ha) are included in the non-prime total.

[3] Includes only the land portion of the ecological reserves, e.g., Robson Bight Ecological Reserve is entirely subtidal and is not included.

GENERALIZED LAND CAPABILITY FOR FORESTRY



Source: Canada Land Inventory Land Capability for Forestry map, 1:1 million scale.

Canada Land Use Monitoring Program

The Canada Land Use Monitoring Program (CLUMP) was established in 1978 by the Lands Directorate of Environment Canada to provide researchers, planners, managers and the public with an information base on land-use change.

A component of this program - Prime Resource Lands - focuses on lands that are geographically limited, but have inherent physical qualities and locational or other socio-economic factors that make these lands of national significance to natural resource production and management. Canada's prime forest land meets the Prime Resource Lands criteria.

Studies such as this contribute to an overview of land-use change and its impact on high capability resource land. Land-use monitoring also assists in the implementation of the Federal Policy on Land Use by addressing nation-wide concerns such as the maintenance of high capability forest land for sustained fibre production.

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Résumé

Dans le présent feuillet d'information, il est question des changements d'utilisation qui sont intervenus dans les forêts de première qualité en Colombie-Britannique entre 1965 et 1985. Ce document s'intéresse tout particulièrement à la transformation de ces forêts en parcs et en zones de conservation. Au cours de la période étudiée, un pour cent de ce type de forêt a été convertie à des fins de récréation et de conservation dans la province. Pour de plus amples renseignements, écrire à l'adresse ci-contre.

For Further Information

Further information on this fact sheet and on the Canada Land Use Monitoring Program may be obtained by contacting:

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